

# MULTI-DETECTOR MICROSCOPIC INSPECTION SYSTEM

## ABSTRACT OF THE DISCLOSURE

5           Techniques for utilizing a microscope inspection system capable of inspecting specimens at high throughput rates are described. The inspection system achieves the higher throughput rates by utilizing more than one detector array and a large field of view to scan the surface of the semiconductor wafers. The microscope inspection system also has high magnification capabilities, a high numerical aperture, and a large field of view.

10 By using more than one detector array, more surface area of a wafer can be inspected during each scanning swath across the semiconductor wafers. The microscope inspection system is configured to have a larger field of view so that the multiple detector arrays can be properly utilized. Additionally, special arrangements of reflective and/or refractive surfaces are used in order to fit the detector arrays within the physical constraints of the

15 inspection system.